

Manitou Bluffs

Conservation Opportunity Area



Ozark
Highlands



The Manitou Bluffs are named for Native American petroglyphs sketched on bluff faces near Rocheport.

USFWS Big Muddy NFWR

The Missouri River seen by the first European explorers was a broad, shallow, meandering river with many braided channels, sandbars and islands. This dynamic system of changing water levels resulted in sand flats, riverfront forests and bottomland forests. The river and its adjacent floodplain supported a remarkable abundance and diversity of wildlife. Native Americans heavily utilized these floodplains for their abundant natural resources.

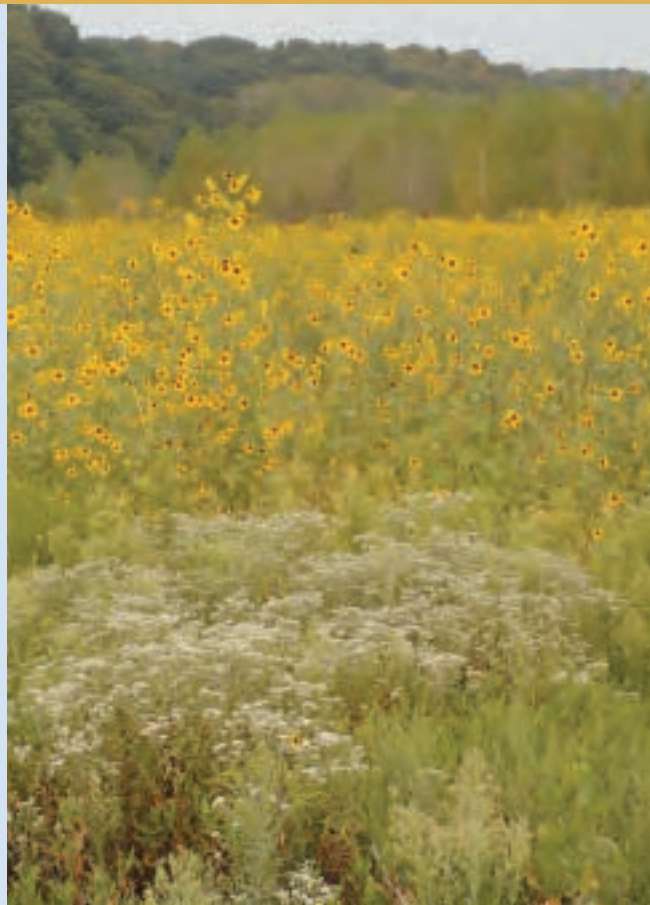
The Manitou Bluffs Conservation Opportunity Area (COA) includes the Missouri River floodplain from north of Arrow Rock downstream to Jefferson City. Following the Great Flood of 1993, public agencies purchased approximately 22,850 acres in the Manitou Bluffs COA to rehabilitate fish and wildlife habitat. Conservation partners are working together to restore natural river habitats and lessen the effects of large-scale flooding events in the future.

Riverfront forests were once common along the Missouri River floodplain. Riverfront forests are found in overflow areas along rivers where floodwater scours and deposits silt, sand and gravel. Flash flooding is frequent and lasts a few hours to several days. Silver maples, green ash and slippery elm dominate the forest canopy. Animals include the great egret, great blue heron, wood duck, osprey and belted kingfisher.

Sandbars and mudflats are the direct products of flooding along a river. Trees and shrubs such as willow, sycamore and river birch stabilize sandbars and mudflats. Many grasses and herbaceous plants grow on the ground layer. Sandbars become riverfront forests when trees and shrubs mature enough to stabilize the soil. Sandbars and mudflats attract many animals including Blanchard's cricket frogs, spotted sandpipers and numerous dragonflies, damselflies, beetles and wasps.

Manitou Bluffs Conservation Strategies

- Restore river habitats for native fish with shallow water habitat development, in-channel and backwater habitat restoration and allowing natural flooding where practical.
- Restore and manage bottomland forest habitat for native plants and animals.
- Restore and manage wetlands and wet prairie habitats to benefit resident and migratory wildlife.
- Conserve natural communities along the river bluffs.
- Manage populations of problematic exotic and invasive species (e.g. Asian carp, zebra mussel, purple loosestrife, Johnson grass, reed canary grass).
- Increase on-river recreational use.
- Partner with communities and landowners to expand outreach, education, interpretation and restoration opportunities related to Missouri River floodplain habitat and history.



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Plants quickly regenerate in a former crop field on the floodplain. Bottomland forests once grew in this rich floodplain soil.

Priority Research and Inventory Needs

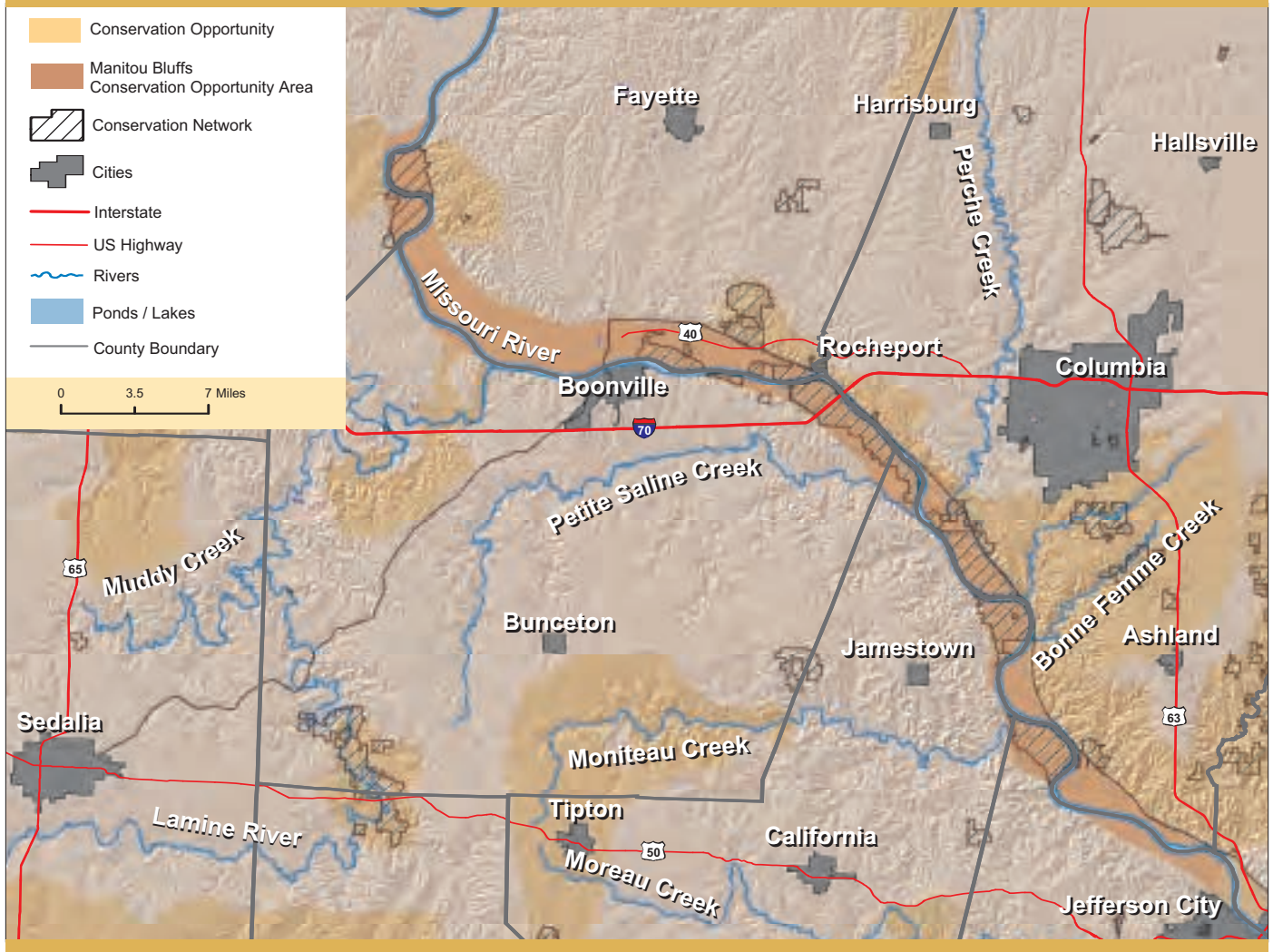
- Determine areas of highest restoration potential.
- Research the effects of invasive plants and animals on native plants and animals.
- Create a scientific clearinghouse to consolidate and share information about riverine studies and projects.
- Inventory mussels, reptiles, amphibians and birds.

Conservation Partners

Existing: Ducks Unlimited (DU); National Wild Turkey Federation (NWTf); Wetland Reserve Program Landowners; University of Missouri – Columbia; Natural Resources Conservation Service (NRCS); U.S. Army Corps of Engineers (USACE); U.S. Fish & Wildlife Service (USFWS); U.S. Geological Survey; U.S. Forest Service; Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC)

Potential: Audubon Missouri; Columbia Audubon Society; Friends of Big Muddy; Missouri River Communities Network; Missouri River Relief; Missouri Waterfowl Association; Missouri Native Plant Society; Central Hardwoods Joint Venture; The Nature Conservancy – Missouri Chapter; Missouri Conservation Heritage Foundation (MCHF)

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Funding Sources

Existing: USFWS annual budget; MDC annual budget; USACE annual budget; DNR annual budget; DU Conservation Projects Program; NWTW Wild Turkey Super Fund; Farm Service Agency Conservation Reserve Program; NRCS Wetland Reserve Program

Promising Future Sources:

Environmental Protection Agency Grants; MCHF Stream Stewardship Trust Fund; National Fish and Wildlife Federation Grants; USFWS North American Wetland Conservation Act Grants; Soil and Water Conservation Districts State Cost Share Funds

Existing Conservation Network

Big Muddy National Fish and Wildlife Refuge (Lisbon Bottom Unit, Jameson Island Unit, Overton Bottoms North Unit); Overton Bottoms South Conservation Area; Eagle Bluffs Conservation Area; Marion Bottoms Conservation Area; Plowboy Bend Conservation Area; Franklin Island Conservation Area; Diana Bend Conservation Area; Rocheport Cave Conservation Area; KATY Trail State Park; Taylor's Landing Access; Providence Access; Hartsburg Access; Marion Access; Capitol View Access



The little blue heron is one of many wetland birds that can be found along rivers.

Jim Rathert, Missouri Department of Conservation

Shallow Water Habitat Restoration



Many native Missouri River fish need shallow water for nurseries. These shallow water habitats were nearly eliminated with flood control and navigational changes to the river. Lisbon Chute (above) developed naturally during the floods of 1993 and 1995. Today, it is managed by the U.S. Fish and Wildlife Service to maintain its shallow water areas.

HDR Company

Conservation Challenges

The Manitou Bluffs Conservation Opportunity Area has been altered by channelization of the river and the draining and conversion of the floodplain for agriculture. The purchase of large bottomland tracts by conservation partners has assisted in restoring floodplain natural communities. Allowing some conservation lands

to act as flood storage during high water will promote native plants and animals and help prevent flooding elsewhere. Potential challenges to conservation success include staff shortages, lack of consistent funding, altered river processes and the urbanization of bluffs.

To learn more about the Manitou Bluffs Conservation Opportunity Area, please contact:



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